

In the Claims

New claims 5-20 are entered.

Claims 1, 2 and 4 have been amended as shown below. Underlines indicate insertions; ~~strikeouts~~ indicate deletions.

1. (Currently amended) A comminuting apparatus, comprising:
 - a frame having an enclosure with an entrance for receiving waste material;
 - a set of overlapping scissor rolls including a feed scissor roll with a plurality of finger knives and a recirculation scissor roll with a plurality of finger knives, both the feed scissor roll and the recirculation scissor roll carried for co-rotation within the enclosure to provide an entrance nip beneath and between the feed scissor roll and the recirculation scissor roll and operative to comminute the waste material into subdivided pieces by drawing the received waste material beneath the feed scissor roll and up between the feed scissor roll and the recirculation scissor roll;
 - a plurality of feeding fingers carried by the frame, one finger knife configured to intermesh in overlapping relation with an adjacent pair of the finger knives of the feed scissor roll during rotation of the feed scissor roll;
 - a plurality of metering fingers carried by the frame, one metering finger configured to intermesh with an adjacent pair of the finger knives of the recirculation scissor roll during rotation of the recirculation scissor roll to;

a shear outtake manifold beneath the scissor rolls and configured to collect the subdivided pieces of waste material;

a screen interposed between the set of scissor rolls and the shear outtake manifold and operative to permit undersized smaller pieces of a size less than a predetermined size to pass therethrough and to prevent oversized pieces of a size greater than a predetermined size from passing therethrough; and

a pneumatic conveyor comprising a source of air flow and a pneumatic duct communicating with an upstream end of the shear outtake manifold and operative to deliver an airstream from the source of air flow into the shear outtake manifold that entrains the subdivided pieces and removes the subdivided pieces from the shear outtake manifold.

2. (Currently amended) The comminuting apparatus of claim 1 further comprising a stripping stripper plate having stripping fingers, the stripper plate finger member carried by the frame and individually associated with the stripping fingers configured to intermesh with the finger knives of the feed scissor roll and the recirculation scissor roll to control movement of comminuted waste material to direct subdivided pieces of waste material toward the recirculation scissor roll and restrict delivery of subdivided pieces of waste material to the feed scissor roll.

3. (Previously presented) The comminuting apparatus of claim 1 further comprising a recycle manifold provided downstream and above the feed scissor roll and

the recirculation scissor roll, the recycle manifold being configured to receive subdivided pieces that have passed between the feed scissor roll and the recirculation scissor roll.

4. (Currently amended) The comminuting apparatus of claim 1 wherein the feed scissor roll and the recirculation scissor roll are carried by the frame in substantially parallel and horizontal relation ~~with axes of the scissor rolls~~, wherein the screen is provided substantially beneath the set of scissor rolls, and the shear outtake manifold is provided substantially beneath the screen.

Enter new claims 5-20 as follows:

5. (New) The comminuting apparatus of claim 1 further comprising a frame member provided along the feed scissor roll and configured to support the plurality of feeding fingers.

6. (New) The comminuting apparatus of claim 5 wherein each of the feeding fingers has at least one scissor edge configured to interact with a respective scissor edge on a respective finger knife of the feed scissor roll to help sever received waste material that is being delivered beneath the feed scissor roll for comminuting between the feed scissor roll and the recirculation scissor roll.

7. (New) The comminuting apparatus of claim 1 further comprising a frame member provided along the recirculation scissor roll and configured to support the plurality of metering fingers.

8. (New) The comminuting apparatus of claim 7 wherein the metering fingers are intermeshed with the finger knives of the recirculation scissor roll so as to meter delivery of subdivided pieces of waste material for recirculation beneath the recirculation scissor roll for further subdividing between the recirculation scissor roll and the feed scissor roll.

9. (New) The comminuting apparatus of claim 8 wherein each of the metering fingers is configured to be received within an inner space cavity formed between adjacent ones of the finger knives of the recirculation scissor roll.

10. (New) The comminuting apparatus of claim 9 wherein each scissor roll comprises a plurality of adjacent scissor rings, each scissor ring having at least one finger knife, and wherein the inner space cavity is formed between a respective one of the scissor rings of the feed scissor roll and an adjacent, respective one of the scissor rings of the recirculation scissor roll.

11. (New) A comminuting apparatus, comprising:

a housing having an entrance for receiving waste material;

a feed scissor roll carried for rotation by the housing and having a plurality of scissor rings, each scissor ring provided with a plurality of finger knives;

a recirculation scissor roll carried for rotation by the housing and having a plurality of scissor rings, each scissor ring provided with a plurality of finger knives, the finger knives of the recirculation scissor roll configured to overlap with the scissor rings of the feed scissor roll with the feed scissor roll and recirculation scissor roll carried for co-rotation by the housing and configured to provide an entrance nip beneath and between the feed scissor roll and the recirculation scissor roll;

an array of feeding fingers carried by the housing and configured to intermesh in overlapping relation with adjacent pairs of the finger knives of the feed scissor roll during rotation of the feed scissor roll;

an array of metering fingers carried by the housing and configured to intermesh with adjacent pairs of the finger knives of the recirculation scissor roll during rotation of the recirculation scissor roll; and

a screen provided at least in part along the recirculation scissor roll to withdraw undersized smaller pieces of waste material less than a predetermined size to pass therethrough and to recirculate oversized pieces of a size greater than the predetermined size for further subdividing between the feed scissor roll and the recirculation scissor roll.

12. (New) The comminuting apparatus of claim 11 further comprising a shear outtake manifold provided beneath the scissor rolls and configured to collect the subdivided pieces of waste material that have passed through the screen.

13. (New) The comminuting apparatus of claim 12 further comprising a pneumatic conveyor including a source of air flow and a pneumatic duct communicating with an upstream end of the shear outtake manifold and operative to deliver an airstream from the source of air flow into the shear outtake manifold that entrains the subdivided pieces and removes the subdivided pieces from the shear outtake manifold.

14. (New) The comminuting apparatus of claim 11 wherein the feed scissor roll and the recirculation scissor roll provide a set of overlapping scissor rolls that intermesh in co-rotation to subdivide waste material therebetween.

15. (New) The comminuting apparatus of claim 11 wherein the housing further comprises a frame and an enclosure in which the entrance is further provided.

16. (New) The comminuting apparatus of claim 11 wherein the feeding fingers and the metering fingers are affixed in a stationary position relative to the housing and the

finger knives of the feed scissor roll and the finger knives of the recirculation scissor roll are carried for rotation relative to the feeding fingers and the metering fingers, respectively.

17. (New) A comminuting apparatus for subdividing and recirculating waste material, comprising:

a housing with an entrance for receiving waste material;

a set of overlapping scissor rolls each having a plurality of scissor rings with each scissor ring having a plurality of finger knives, the scissor rolls comprising a feed scissor roll and a recirculation scissor roll carried for co-rotation by the housing for delivery of waste material therebetween;

a plurality of feeding fingers carried in a stationary position relative to the housing and configured to intermesh in overlapping relation with adjacent pairs of the finger knives of the feed scissor roll;

a plurality of metering fingers carried in a stationary position relative to the housing and configured to intermesh in overlapping relation with adjacent pairs of the finger knives of the recirculation scissor roll;

a stripping plate carried by the housing and having a plurality of stripping fingers configured to intermesh with the finger knives of the feed scissor roll to direct subdivided pieces of waste material toward the recirculation scissor roll and restrict delivery of subdivided pieces of waste material from being delivered to the feed scissor roll; and

a screen provided along the recirculation scissor roll to withdraw relatively small pieces of waste material therethrough and to recirculate relatively large pieces of waste material for further subdividing via the entrance nip between the feed scissor roll and the recirculation scissor roll.

18. (New) The comminuting apparatus of claim 17 further comprising a recycle manifold provided downstream and above the feed scissor roll and the recirculation scissor roll, the recycle manifold configured to receive subdivided pieces that have passed between the feed scissor roll and the recirculation scissor roll.

19. (New) The comminuting apparatus of claim 17 wherein the feed scissor roll is slightly elevated relative to the recirculation scissor roll.

20. (New) The comminuting apparatus of claim 17 wherein the feed scissor roll is driven in a clockwise rotation and the recirculation scissor roll is driven in a counter-clockwise rotation.